ABSTRACT

A spectrophotometric system includes a zoom lens assembly that is mounted for axial translation relative to an integrating sphere. The zoom lens assembly includes first and second focusing lens mounted to an axially movable lens carrier. The lens carrier is positioned intermediate first and second sets of mirrors for reflecting/directing SCE and SCI beams toward fiber ports. A reference beam is also emitted from the integrating sphere and transmitted to a processor, thereby resulting in simultaneous tri-beam measurements. The disclosed spectrophotometric systems may also include an aperture plate detection assembly and/or a sample holder assembly that incorporates a dampening gas spring. The aperture plate detection system includes a detection disk that may include a plurality of pre-positioned sensors that interact with an activating ridge formed on the aperture plate for identification thereof.

HARTFORD: 608898.01